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STIC-ILL

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Euro J. Biochem (1982): 123 (1), 141-152

Journal of Microbiology (1990): 28 (3) 497-503

European Journal of Biochem (1978): 86 (2) 531-537

Journal of Infection (1993) 27/2 151-155

9404184T

Asia-Oceania Journal of Obstertrics and Gynaecology (1992) 18 (4) 371-377

Journal of Acquired Immune Deficiency syndromes and human retrovirology (1996): 13 (4) 314-319

Internationa Journal of Epidemiology (1992): 21 (5) 989-994

Blood (1996) 88 (8) 3004-3009

Journal of Pediatrics (1995) 127 (6) 924-928.

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Thank you!!

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L11 ANSWER 1 OF 9 MEDLINE
ACCESSION NUMBER: 2000169430 MEDLINE
DOCUMENT NUMBER: 20169430
TITLE: Transmission of human T-cell lymphotropic virus type 1 **tax** to rabbits by **tax**-only-positive human cells.
AUTHOR: **Zucker-Franklin D; Pancake B A;** Lalezari P; Khorshidi M
CORPORATE SOURCE: New York University School of Medicine, New York, New York 10016, USA.
SOURCE: CLINICAL AND DIAGNOSTIC LABORATORY IMMUNOLOGY, (2000 Mar) 7 (2) 274-8.
Journal code: CB7. ISSN: 1071-412X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY WEEK: 20000701
AB The human T-cell lymphrotropic virus type 1 (**HTLV**-1) is causally related to adult T-cell leukemia and lymphoma and the neurodegenerative diseases tropical spastic paraparesis and **HTLV**-1-associated myelopathy. In the United States the prevalence of infection has been estimated to range from 0.016 to 0.1% on the basis of serologic tests for antibodies to the viral structural proteins. Blood from donors positive for antibodies to **HTLV**-1 or **HTLV**-2 is not used for transfusion. However, patients with the cutaneous T-cell lymphoma **mycosis fungoides** (MF) are **HTLV**-1 and -2 seronegative yet harbor **proviral sequences** identical to those that encode the **HTLV**-1 transactivating and transforming gene product p40tax in their peripheral blood mononuclear cells (PBMCs), and they usually have antibodies to p40(**tax**). Moreover, a study of 250 randomly selected blood donors revealed that approximately 8% of these seronegative individuals also had **HTLV**-1 **tax** sequences and antibodies to p40(**tax**), while they lacked sequences and antibodies related to gag, pol, or env. Thus, it seemed important to determine whether the "**tax**-only" state can be transmitted by transfusion. To this end, PBMCs from **HTLV**-1 and -2 seronegative **tax**-only-positive MF patients or from healthy **tax**-only-positive blood donors were injected into adult rabbits, an established animal model for **HTLV**-1 infection. The PBMCs of all injected rabbits became **tax** sequence positive. These observations suggest that **HTLV**-1 **tax** can be transmitted by **tax**-only-positive mononuclear cells.

L11 ANSWER 2 OF 9 MEDLINE
ACCESSION NUMBER: 97322385 MEDLINE
DOCUMENT NUMBER: 97322385
TITLE: Reexamination of human T cell lymphotropic virus (**HTLV**-I/II) prevalence.
AUTHOR: **Zucker-Franklin D; Pancake B A;** Marmor M; Legler P M
CORPORATE SOURCE: Department of Medicine, New York University Medical Center, 550 First Avenue, New York, NY 10016, USA.
CONTRACT NUMBER: RO1-CA58519 (NCI)
DA06001 (NIDA)
1P30AI27742 (NIAID)

SOURCE: + PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1997 Jun 10) 94 (12) 6403-7. Journal code: PV3. ISSN: 0027-8424.

PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199709
ENTRY WEEK: 19970902

AB In the United States, blood donors are being screened for infection with human T cell lymphotropic viruses I and II (**HTLV**-I/II) by serologic means, which detect antibodies to the structural proteins of these viruses. Because patients with **mycosis fungoides** (MF) usually do not have such antibodies even though their cells harbor **HTLV**-I **Tax** and/or pol **proviral sequences**, it was questioned whether the prevalence of **HTLV** infection among healthy blood donors may also be underestimated by current means of testing. To examine this possibility, a study on specimens of relatives of **mycosis fungoides** patients (MFR) was begun. In addition, to collect data more expeditiously, a cohort of former injection drug users (IDUs) was tested by routine serologic methods, as well as by PCR/Southern blot analysis for **Tax**, pol, and gag **proviral sequences** and Western blot analysis for antibodies to the **Tax** gene product. To date, 6/8 MFRs and 42/81 (51.8%) of HIV-negative IDUs proved to be positive for **HTLV**, whereas routine serology identified none of the MFR and only 18/81 (22.2%) of the IDUs. Among the latter test subjects, the incidence of **HTLV**-I also proved to be 10 times higher than expected. Therefore, it is likely that among healthy blood donors infection with **HTLV**-I/II is more prevalent than is currently assumed. Since **Tax** is the transforming sequence of **HTLV**-I/II, testing for **Tax** sequences and antibodies to its gene product may be desirable in blood transfusion and tissue donor facilities.

L11 ANSWER 3 OF 9 MEDLINE
ACCESSION NUMBER: 97114633 MEDLINE
DOCUMENT NUMBER: 97114633
TITLE: Determination of the true prevalence of infection with the human T-cell lymphotropic viruses (**HTLV**-I/II) may require a combination of biomolecular and serological analyses.

AUTHOR: **Pancake B A; Zucker-Franklin D**; Marmor M; Legler P M

CORPORATE SOURCE: Department of Medicine, New York University Medical Center, NY 10016, USA.

CONTRACT NUMBER: RO1-CA58519 (NCI)
DA06001 (NIDA)
IP30A127742

SOURCE: + PROCEEDINGS OF THE ASSOCIATION OF AMERICAN PHYSICIANS, (1996 Nov) 108 (6) 444-8. Journal code: CDQ. ISSN: 1081-650X.

PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199705

AB Infection with the human T-cell lymphotropic virus types I and II (**HTLV**-I/II) usually is determined by tests that detect antibodies to the viral structural proteins. However, recent studies revealed that patients with **mycosis fungoides** have proviral DNA

sequences related to the **HTLV** transactivating-transforming gene **tax**, without having antibodies to the virus. These results raised the possibility that the prevalence of **HTLV** infection in the general population of the United States also may be underestimated. To reassess the prevalence of **HTLV**-I/II infection effectively, a population at increased risk for infection (i.e., a cohort of injection drug users [IDUs]) was studied. Paired sera and peripheral blood mononuclear cells (PBMCs) from 81 IDUs were subjected to testing by Western blot analysis for antibodies to the viral structural proteins gag and env and by polymerase chain reaction (PCR) Southern analysis to detect gag, pol and **tax** proviral DNA sequences. Western blot assays showed 1 of 81 IDUs to be positive for **HTLV**-I, 14 to be positive for antibodies to **HTLV**-II, and 3 to be **HTLV**-serotype indeterminate. When whole-cell lysates of PBMCs from these individuals were subjected to PCR and Southern analysis. 39 of 81 were found to have **HTLV**-related sequences. A total of nine IDUs were found to be infected with **HTLV**-I, a figure nearly 10 times higher than that estimated by serology alone. Bio-molecular analysis showed **HTLV** -II-specific **proviral sequences** in 21 IDUs. Three individuals were seropositive for **HTLV**-II but lacked PCR evidence of gag, pol and **tax** sequences. Thus, the overall prevalence of **HTLV** infection among this cohort was 59% (43 of 81) (i.e., more than twice the frequency predicted by serology, 18 of 81 or 22%). These results indicate that it may be necessary to incorporate biomolecular as well as serological methodologies to identify all persons infected with these retroviruses.

L11 ANSWER 4 OF 9 MEDLINE
ACCESSION NUMBER: 97104210 MEDLINE
DOCUMENT NUMBER: 97104210
TITLE: The difficulty of detecting **HTLV**-1 **proviral sequences** in patients with **mycosis fungoides**.
AUTHOR: **Pancake B A; Zucker-Franklin D**
CORPORATE SOURCE: Department of Medicine, New York University Medical Center, New York 10016, USA.
CONTRACT NUMBER: RO1-CA-58519 (NCI)
SOURCE: JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES AND HUMAN RETROVIROLOGY, (1996 Dec 1) 13 (4) 314-9. Journal code: B7J. ISSN: 1077-9450.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY WEEK: 19970204

AB Although most patients with cutaneous T cell lymphomas, including **mycosis fungoides** (MF) and its leukemic variant, the Sezary syndrome, are seronegative for antibodies to the human T cell lymphotropic viruses (**HTLV**-I/II), it has recently been shown that > 95% of such patients harbor proviral DNA sequences related to the region of the **HTLV** genome that encodes the transregulatory/transforming gene, **tax**. However, the demonstration of **HTLV** sequences, even after amplification by polymerase chain reaction (PCR), has not been universally successful, and some investigators continue to question this observation. In an effort to resolve this controversy, we have compared published methodologies that have been less successful with techniques currently used in this laboratory. Major differences were found in (a) the nature of the cells used [freshly isolated versus cultured peripheral blood mononuclear cells (PBMC)] and (b) the methods used to prepare samples for PCR (whole cell lysates versus DNA extracts). PBMC from 10 different MF patients and the healthy daughter of 1 of the patients were subjected to comparative analyses. While all of the PBMC lysates were positive, the DNA extract

from only one of these individuals revealed **HTLV tax** sequences. Studies were also conducted comparing cell lysates and DNA extracts of cultured cells derived from **tax** sequence-positive PBMC from seven different MF patients. The cells from four of the seven were shown to have retained **tax** sequences after varying times in culture, when whole-cell lysates were used as targets for PCR amplification and Southern analysis, whereas none of the DNA extracts were positive. It appears that the use of whole-cell lysates instead of DNA extracts and the use of fresh instead of cultured cells greatly ennance the ability to detect **HTLV**-1 **tax** sequences in specimens from MF patients.

L11 ANSWER 5 OF 9 MEDLINE
ACCESSION NUMBER: 97028183 MEDLINE
DOCUMENT NUMBER: 97028183
TITLE: Demonstration of antibodies to human T-cell lymphotropic virus-I **tax** in patients with the cutaneous T-cell lymphoma, **mycosis fungoides**, who are seronegative for antibodies to the structural proteins of the virus.
AUTHOR: **Pancake B A**; Wassef E H; **Zucker-Franklin D**
CORPORATE SOURCE: Department of Medicine, New York University Medical Center, New York 10016, USA.
CONTRACT NUMBER: CA58519 (NCI)
AI07382
SOURCE: BLOOD, (1996 Oct 15) 88 (8) 3004-9.
Journal code: A8G. ISSN: 0006-4971.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer Journals
ENTRY MONTH: 199702
AB Although most patients with the cutaneous T-cell lymphoma, **mycosis fungoides** (MF), are seronegative for human T-cell lymphotropic virus-I or -II (**HTLV**-I/II) when tested by assays that measure only antibodies to the viral structural proteins, the majority of such patients harbor **HTLV**-I-related pol and **tax** **proviral sequences** that encode proteins not included in routinely used serologic tests. **Tax** mRNA has also been detected in their peripheral blood mononuclear cells (PBMC). Therefore, it seemed possible that these patients have antibodies to the **tax** protein. To investigate this, enzyme-linked immunosorbent assays (ELI-SAs) and Western blot assays were set up, using as antigens the full-length **HTLV**-I **tax** cloned from the prototypic **HTLV** -I-infected cell line, C91PL, and from PBMC of a MF patient, as well as a synthetic peptide made to the carboxy-terminal 20 amino acids of **tax**-I. Of 60 MF patients whose PBMC were shown to be positive for **tax** proviral DNA and mRNA, 50 (83%) were shown to have **tax** antibodies. The antigen derived from the MF patient was most useful in detecting such antibodies. These results demonstrate the need for including other **HTLV**-related antigens in addition to gag and env in serologic tests used to identify **HTLV**-infected individuals. The findings underscore the fact that individuals considered seronegative on the basis of currently used tests can be infected with **HTLV**.

L11 ANSWER 6 OF 9 MEDLINE
ACCESSION NUMBER: 96183546 MEDLINE
DOCUMENT NUMBER: 96183546
TITLE: Localization of human T-cell lymphotropic virus-1 **tax proviral sequences** in skin biopsies of patients with **mycosis fungoides** by in situ polymerase chain reaction.

AUTHOR: Khan Z M; Sebenik M; **Zucker-Franklin D**
CORPORATE SOURCE: Department of Medicine, New York University Medical Center,
New York, USA.
CONTRACT NUMBER: PO1-CA58519 (NCI)
SOURCE: JOURNAL OF INVESTIGATIVE DERMATOLOGY, (1996 Apr) 106 (4) 667-72.
Journal code: IHZ. ISSN: 0022-202X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199608

AB The histopathologic diagnosis of **mycosis fungoides** (MF), even when clinical manifestations of the disease seem convincing, is often tenuous. The observation that practically all patients with MF harbor human T cell lymphotropic virus type I (**HTLV**-I) **proviral sequences** in their circulating lymphocytes raised the possibility that such viral footprints could be detected in their cutaneous infiltrates. Application of in situ polymerase chain reaction (PCR) to skin biopsies of 11 of 12 patients demonstrated this assumption to be correct. In addition, cells suspected to be keratinocytes were also positive. None of 10 skin biopsies from a variety of sources used as controls, nor 3 lymph node biopsies from patients with B-cell lymphomas, showed any **HTLV proviral sequences** on in situ PCR. On the basis of these observations, it is concluded that in situ PCR carried out on skin biopsies of patients with presumptive MF may help to established the diagnosis.

L11 ANSWER 7 OF 9 MEDLINE
ACCESSION NUMBER: 95164683 MEDLINE
DOCUMENT NUMBER: 95164683
TITLE: The cutaneous T cell lymphoma, **mycosis fungoides**, is a human T cell lymphotropic virus-associated disease. A study of 50 patients.
AUTHOR: **Pancake B A; Zucker-Franklin D;** Coutavas E E
CORPORATE SOURCE: Department of Medicine, New York University Medical Center,
New York 10016..
CONTRACT NUMBER: DK-12274 (NIDDK)
HL-40103 (NHLBI)
AI07382 (NIAID)
SOURCE: JOURNAL OF CLINICAL INVESTIGATION, (1995 Feb) 95 (2) 547-54.
Journal code: HS7. ISSN: 0021-9738.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer Journals
ENTRY MONTH: 199505

AB For nearly two decades it has been suspected that the cutaneous T cell lymphoma, **mycosis fungoides** (MF), and its leukemic variant, the Sezary syndrome, are caused by the human T lymphotropic virus (**HTLV**-I/II). Arguments against this concept included the finding that only a small number of MF patients have antibodies to **HTLV** -I/II and that attempts to detect **proviral sequences** by mere Southern hybridization of extracted DNA usually met with failure. However, we have reported repeatedly that **HTLV**-like particles emerge in blood mononuclear cell (PBMC) cultures of practically all patients with this disease. In several instances, the particles were

identified as **HTLV** by immunoelectron microscopy as well as biomolecular analysis. With the assumptions that the virus in MF patients may have become detection by Southern hybridization alone, the extracts of freshly isolated PBMC of 50 consecutive patients were subjected to combined PCR/Southern analysis. Here we report the presence of **HTLV** pol and/or **tax proviral sequences** in 46 out of 50 (92%) of the patients tested. In addition, five of the patients, who lacked antibodies to **HTLV**-I/II structural proteins, were found to be seropositive for **tax**. It thus seems reasonable to conclude that MF/Sezary syndrome is an **HTLV** -associated disease and that lack of an immune response does not preclude infection with this type of virus.

L11 ANSWER 8 OF 9 MEDLINE
ACCESSION NUMBER: 95127300 MEDLINE
DOCUMENT NUMBER: 95127300
TITLE: Cutaneous disease resembling **mycosis fungoides** in HIV-infected patients whose skin and blood cells also harbor proviral **HTLV** type I.
AUTHOR: **Zucker-Franklin D; Pancake B A;** Friedman-Kien A E
CORPORATE SOURCE: New York University Medical Center, New York 10016..
CONTRACT NUMBER: DK12274 (NIDDK)
HL42103 (NHLBI)
SOURCE: AIDS RESEARCH AND HUMAN RETROVIRUSES, (1994 Sep) 10 (9) 1173-7.
Journal code: ART. ISSN: 0889-2229.
PUB. COUNTRY: United States
LANGUAGE: Journal; Article; (JOURNAL ARTICLE)
FILE SEGMENT: English
ENTRY MONTH: Priority Journals
199504
AB Two homosexual HIV-infected patients with lymphocyte counts of < 50 presented with intense pruritis, hyperpigmentation, and skin lesions clinically suggestive of the cutaneous T cell lymphoma, **mycosis fungoides**. On light microscopy, the skin biopsies were difficult to interpret because of the sparseness of the lymphocytic infiltrates. However, electron microscopy revealed typical Sezary cells in the peripheral blood and skin. Cultures of blood mononuclear cells of one of the patients generated **HTLV**-I-like particles. Although both patients lacked antibodies to **HTLV**, their blood and skin specimens proved to harbor **tax** and pol **HTLV**-I **proviral sequences** as shown by the polymerase chain reaction and Southern blot analysis. Dual infection with HIV and **HTLV** should be considered in the diagnostic work-up of patients at risk, even in the absence of demonstrable antibodies. Dual infections could result in clinical manifestations and evolution of disease not anticipated in patients who harbor only one of these retroviruses.

L11 ANSWER 9 OF 9 MEDLINE
ACCESSION NUMBER: 95078109 MEDLINE
DOCUMENT NUMBER: 95078109
TITLE: The role of human T-cell lymphotropic viruses (**HTLV** -I and II) in cutaneous T-cell lymphomas.
AUTHOR: **Zucker-Franklin D; Pancake B A**
CORPORATE SOURCE: Department of Medicine, New York University Medical Center, NY 10016..
CONTRACT NUMBER: RO1-DK-12274 (NIDDK)
RO1-HL-42103 (NHLBI)
SOURCE: SEMINARS IN DERMATOLOGY, (1994 Sep) 13 (3) 160-5.
Journal code: AVV. ISSN: 0278-145X.
PUB. COUNTRY: United States
LANGUAGE: Journal; Article; (JOURNAL ARTICLE)
English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199503

AB Although an association between the human T cell lymphotropic viruses (**HTLV**-I and II) and cutaneous T cell lymphoma (CTCL) has long been suspected, only a minor fraction of patients with this disease have antibodies to the viral structural proteins. However, the consistent finding of **HTLV**-like particles in cultures of peripheral blood mononuclear cells (PBMC) from such patients has prompted a continued effort to find evidence linking the virus to this disease. Capitalizing on the increased sensitivity afforded by combining PCR amplification with detection by Southern blot hybridization, it became possible to demonstrate **HTLV tax** and/or pol **proviral sequences** in freshly isolated PBMC of most patients with **mycosis fungoides**. These observations suggest a possible role of the virus in the pathogenesis of CTCL, and may impact on diagnostic and therapeutic measures in the future.

The effects of breastfeeding and presence of antibody to p40 (tax) protein of human T cell lymphotropic virus type-I on mother to child transmission.

AUTHOR: Hinuma Y.; Hayashi J.; Noguchi A.; Nakashima K.; Kajiyama W.; Kashiwagi S.; Fukada T.

CORPORATE SOURCE: Department of General Medicine, Kyushu University Hospital, Fukuoka, Japan.

SOURCE: International Journal of Epidemiology, (1992) 21/5 (929-934).
ISSN: 0300-5771 CODEN: IJEPBF

COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
007 Pediatrics and Pediatric Surgery
026 Immunology, Serology and Transplantation

LANGUAGE: English
SUMMARY LANGUAGE: English

AB We examined the effects of various factors, including duration of breastfeeding, the status of mother's anti-p40(tax) and titre of mother's anti-human T cell lymphotrotropic virus type-I (HTLV-I) on mother to child transmission of HTLV-I in 76 HTLV-I carrier mothers and 175 of their children. The overall prevalence of anti-HTLV-I among children was 16.0%. The prevalence of anti-HTLV-I among children breastfed for over 3 months was significantly higher (27.6%) than that of those breastfed for under 3 months (5.1%; P=0.012). Of the 78 bottle-fed children, 10 (12.8%) were positive for anti-HTLV-I. In the children breastfed for over 3 months, the prevalence of anti-HTLV-I among 37 children of anti-p40(tax) positive mothers was 37.8% and that of 21 children of anti-p40(tax) negative mothers was 9.5%, a significant difference (P=0.044). These data suggest that about 13% of bottle-fed children born to carrier mothers are infected with HTLV-I by routes other than breast milk, and that the mother's anti-p40(tax) can serve as a marker of infectivity of HTLV-I in the case of breastfeeding for over 3 months.

97028183
TITLE: Demonstration of antibodies to human T-cell lymphotropic virus-I tax in patients with the cutaneous T-cell lymphoma, mycosis fungoides, who are seronegative for antibodies to the structural proteins of the virus.

AUTHOR: **Pancake B A**; Nassel E H; **Zucker-Franklin D**

CORPORATE SOURCE: Department of Medicine, New York University Medical Center, New York 10016, USA.

CONTRACT NUMBER: CA58519 (NCI)
AI07388

SOURCE: BLOOD, (1996 Oct 15) 88 (8) 3004-9.
Journal code: ABC. ISSN: 0006-4971.

PUB. COUNTRY: United States

LANGUAGE: Journal; Article; (JOURNAL ARTICLE)
FILE SEGMENT: English
Abridged Index Medicus Journals; Priority Journals; Cancer Journals

ENTRY MONTH: 199712

AB Although most patients with the cutaneous T-cell lymphoma, mycosis fungoides (MF), are seronegative for human T-cell lymphotropic virus-I or -II (**HTLV-I**/II) when tested by assays that measure only antibodies to the viral structural proteins, the majority of such patients harbor **HTLV-I**-related pol and tax proviral sequences that **encode** proteins not included in routinely used serologic tests. Tax mRNA has also been detected in their peripheral blood mononuclear cells (PBMC). Therefore, it seemed possible that these patients have antibodies to the tax protein. To investigate this, enzyme-linked immunosorbent assays (ELI-SAs) and Western blot assays were set up, using as antigens the full-length **HTLV-I** tax cloned from the prototypic **HTLV-I**-infected cell line, C91PL, and from PBMC of a MF patient, as well as a synthetic peptide made to the carboxy-terminal 20 amino acids of tax-I. Of 60 MF patients whose PBMC were shown to be positive for tax proviral **DNA** and mRNA, 50 (83%) were shown to have tax antibodies. The antigen derived from the MF patient was most useful in detecting such antibodies. These results demonstrate the need for including other HTLV-related antigens in addition to gag and env in serologic tests used to identify HTLV-infected individuals. The findings underscore the fact that individuals considered seronegative on the basis of currently used tests can be infected with HTLV.

DUPLICATE 2

L10 ANSWER 2 OF 2 MEDLINE
ACCESSION NUMBER: 97104210 MEDLINE
DOCUMENT NUMBER: 97104210
TITLE: The difficulty of detecting HTLV-I proviral sequences in patients with mycosis fungoides.

AUTHOR: **Pancake B A; Zucker-Franklin D**
CORPORATE SOURCE: Department of Medicine, New York University Medical Center, New York 10016, USA.

CONTRACT NUMBER: RO1-CA-38619 (NCI)
SOURCE: JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES AND HUMAN RETROVIROLOGY, (1996 Dec 1) 13 (4) 314-9.
Journal code: B7C. ISSN: 1077-9450.

PUB. COUNTRY: United States

Journal; Article; JOURNAL ARTICLE
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199[illegible]
ENTRY WEEK: 199[illegible]04

AB Although most patients with cutaneous T cell lymphomas, including mycosis fungoides MF) and its leukemic variant, the Sezary syndrome, are seronegative for antibodies to the human T cell lymphotropic viruses (**HTLV-I**/II), it has recently been shown that > 95' of such patients harbor proviral **DNA** sequences related to the region of the HTLV genome that **encodes** the transregulatory/transforming gene, tax. However, the demonstration of HTLV sequences, even after amplification by polymerase chain reaction (PCR), has not been universally successful, and some investigators continue to question this observation. In an effort to resolve this controversy, we have compared published methodologies that have been less successful with techniques currently used in this laboratory. Major differences were found in (a) the nature of the cells used (freshly isolated versus cultured peripheral blood mononuclear cells (PBMC) and (b) the methods used to prepare samples for PCR (whole cell lysates versus **DNA** extracts). PBMC from 11 different MF patients and the healthy daughter of 1 of the patients were subjected to comparative analyses. While all of the PBMC lysates were positive, the **DNA** extract from only one of these individuals revealed HTLV tax sequences. Studies were also conducted comparing cell lysates and **DNA** extracts of cultured cells derived from tax sequence-positive PBMC from seven different MF patients. The cells from four of the seven were shown to have retained tax sequences after varying times in culture, when whole-cell lysates were used as targets for PCR amplification and Southern analysis, whereas none of the **DNA** extracts were positive. It appears that the use of whole-cell lysates instead of **DNA** extracts and the use of fresh instead of cultured cells greatly enhance the ability to detect HTLV-1 tax sequences in specimens from MF patients.

may be immunosuppressive and is almost indistinguishable serologically from **HTLV-I**. As with human immunodeficiency virus (HIV), infection with these viruses is likely to be lifelong and the disease may have a latent period of many years. Unlike HIV, **HTLV-I** and/or HTLV-II are not likely to be transmitted from mother to child prenatally, and usually require **breast-feeding** for vertical transmission. It is likely that **HTLV-I** and/or HTLV-II has been prevalent in IDUs for far longer than the HIV epidemic. **HTLV-I** and/or HTLV-II are relevant to the AIDS epidemic in that they may function as biologic markers of behavioral risk status for HIV infection in IDUs or their sexual partners, and they may accelerate the course of HIV infection in persons coinfected with **HTLV-I** and/or HTLV-II and HIV. Whether it will be more likely as the HIV epidemic progresses. **Pregnant** addicts entering outpatient methadone maintenance treatment in San Francisco County or Contra Costa County during 1990 were found to have an HTLV-II prevalence of 21% (n = 24). Important issues in counseling infected methadone patients are described.

6101712
TITLE: Mother-to-child transmission of human T-lymphotropic virus type II.
AUTHOR: Vik Dyke R B; Heneine W; Perrin M E; Rudolph D; Starszak E;
Woods T; Switzer W M; Kaplan J E
CORPORATE SOURCE: Department of Pediatrics, Tulane University School of Medicine, New Orleans, Louisiana.
CONTRACT NUMBER: U62-CCU603479
SOURCE: JOURNAL OF PEDIATRICS, (1995 Dec) 127 (6) 904-8.
Journal code: JLA. ISSN: 0022-3476.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer Journals
ENTRY MONTH: 199512

AB OBJECTIVE: To determine the frequency of mother-to-child transmission of human T-lymphotropic virus type II (HTLV-II) and to explore its association with **breast-feeding**. DESIGN: Prospective study of children born to a cohort of HTLV-II-infected **pregnant** women and a cross-sectional study of older siblings of these children. METHODS: Maternal sera were screened with an **HTLV-I** enzyme immunoassay that detects antibody to both **HTLV-I** and HTLV-II. Confirmatory serologic testing and viral typing were performed by Western blot, radioimmunoprecipitation assay, enzyme immunoassay with HTLV type-specific proteins, and polymerase chain reaction (PCR) analysis of DNA from peripheral blood mononuclear cells. The presence of HTLV was evaluated in children by serial serologic and PCR testing. Molecular analysis of PCR products from infected mother-child pairs was performed by means of restriction fragment length polymorphism of HTLV-II long-terminal repeated sequences. RESULTS: Twenty-nine HTLV-II-infected women were identified, and these 29 women had 30 pregnancies during the study. Of 28 live infants born to infected women, 19 were examined and none was infected with HTLV-II. Sixteen older children less than 10 years of age who were born previously to the infected women were also examined; two were infected with HTLV-II. One infected child was breast fed for 2 months and the second was not breast fed. The viral patterns of restriction fragment length polymorphism in the two infected children were distinct, but the viral pattern in each child was identical to that of her mother's virus, suggesting mother-to-child transmission. Overall, among examined children, 1 of 7 breast-fed children (14%; 95% confidence interval: 0, 40) and 1 of 28 children who were not breast fed (3.6%; 95% confidence interval: 0, 10) were infected with HTLV-II. CONCLUSION: Mother-to-child transmission of HTLV-II occurs both with and without **breast-feeding** and at rates similar to those of **HTLV-I**. We believe that this is the first demonstration of mother-to-child transmission of HTLV-II in the absence of **breast-feeding**.

The difficulty of detecting HTLV-I proviral sequences in patients with mycosis fungoides.

AUTHOR: **Pancake B A; Zucker-Franklin D**
CORPORATE SOURCE: Department of Medicine, New York University Medical Center, New York 10016, USA.
CONTRACT NUMBER: PO1-CA-58119 (NCI)
SOURCE: JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES AND HUMAN RETROVIROLOGY, (1996 Dec 1) 13 (4) 314-9.
Journal code: BTJ. ISSN: 1077-9450.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY WEEK: 19970204

AB Although most patients with cutaneous T cell lymphomas, including mycosis fungoides (MF) and its leukemic variant, the Sezary syndrome, are seronegative for antibodies to the human T cell lymphotropic viruses (**HTLV-I**/II), it has recently been shown that > 95% of such patients harbor proviral **DNA** sequences related to the region of the HTLV genome that **encodes** the transregulatory/transforming gene, tax. However, the demonstration of HTLV sequences, even after amplification by polymerase chain reaction (PCR), has not been universally successful, and some investigators continue to question this observation. In an effort to resolve this controversy, we have compared published methodologies that have been less successful with techniques currently used in this laboratory. Major differences were found in (a) the nature of the cells used [freshly isolated versus cultured peripheral blood mononuclear cells (PBMC)] and (b) the methods used to prepare samples for PCR (whole cell lysates versus **DNA** extracts). PBMC from 10 different MF patients and the healthy daughter of 1 of the patients were subjected to comparative analyses. While all of the PBMC lysates were positive, the **DNA** extract from only one of these individuals revealed HTLV tax sequences. Studies were also conducted comparing cell lysates and **DNA** extracts of cultured cells derived from tax sequence-positive PBMC from seven different MF patients. The cells from four of the seven were shown to have retained tax sequences after varying times in culture, when whole-cell lysates were used as targets for PCR amplification and Southern analysis, whereas none of the **DNA** extracts were positive. It appears that the use of whole-cell lysates instead of **DNA** extracts and the use of fresh instead of cultured cells greatly enhance the ability to detect HTLV-I tax sequences in specimens from MF

insight into the transmission of the HTV.

DUPLICATE 8

L11 ANSWER 12 OF 13 MEDLINE
ACCESSION NUMBER: 93101771 MEDLINE
DOCUMENT NUMBER: 93101771
TITLE: A sero-epidemiological study on mother-to-child transmission of **HTLV-I** in southern Kyushu, Japan.
AUTHOR: Oki T; Yoshinaga M; Otsuka H; Miyata K; Sonoda S; Nagata Y
CORPORATE SOURCE: Department of Obstetrics and Gynecology, Faculty of Medicine, Kagoshima University, Japan.
SOURCE: ASIA-OCEANIA JOURNAL OF OBSTETRICS AND GYNAECOLOGY, (1992 Dec) 18 (4) 371-7.
Journal code: 9DT. ISSN: 0389-2336.
PUB. COUNTRY: Japan
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
ENTRY MONTH: 199305

AB In vertical transmission of **HTLV-I** the duration of **breast-feeding** seems to be an important risk factor. In this study, we made prospective and retrospective surveys on the rate of vertical transmission of **HTLV-I** in infants and their siblings born to **HTLV-I** seropositive mothers. The results obtained were as follows. 1) In the prospective study, 885 of the 16,283 **pregnant** women examined were **HTLV-I** seropositive, and the seropositive rate was 5.4%. The seroconversion rates of short-term (< 7 months) and long-term (> or = 7 months) **breast-feeders** were 3.8% (1/26 cases) and 25.0% (1/4 cases), respectively, and the rate of bottle-feeders was 5.6% (10/177 cases). Short-term **breast-feeding** tended to yield a lower seroconversion rate of infants. In addition, the seroconversion rate of short-term **breast-feeders** was nearly equal to that of bottle-feeders: 3.8% vs. 5.6%. 2) In the retrospective study, the seroconversion rates of short-term and long-term **breast-feeders** in their siblings were 4.5% (3/67 cases) and 14.0% (19/136 cases) respectively. There was a significant difference between the 2 groups ($p < 0.01$). Thus, the results of our retrospective and prospective studies suggest that short-term **breast-feeding** might lessen the risk of breast-milk-borne transmission of **HTLV-I** from carrier mothers to their children.

DUPLICATE 9

L11 ANSWER 13 OF 13 MEDLINE
ACCESSION NUMBER: 92113802 MEDLINE
DOCUMENT NUMBER: 92113802
TITLE: Human T-cell lymphotrophic virus in California's injection drug users.
AUTHOR: Trachtenberg A I; Gaudino J A; Hanson C V
CORPORATE SOURCE: Bureau of Drug Abuse Services, Santa Clara County Public Health Department, San Jose, California.
SOURCE: JOURNAL OF PSYCHOACTIVE DRUGS, (1991 Apr-Jun) 23 (2) 225-32.
Journal code: JLI. ISSN: 0279-1072.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199204

AB Human T-cell lymphotrophic virus I (**HTLV-I**) and human T-cell lymphotrophic virus II (HTLV-II) are closely related retroviruses that are highly prevalent in infectious drug users (IDUs). The bulk of infection in this group probably occurs with HTLV-II, with a lower prevalence of **HTLV-I**. **HTLV-I** is known to cause adult T-cell leukemia/lymphoma and tropical spastic paraparesis. HTLV-II has not been known to cause any human pathology, but

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ACCESSION NUMBER: 93295551 EMBASE
DOCUMENT NUMBER: 1993295551
TITLE: Family study of women showing development of antibody to human T-cell leukemia virus I and assessment of the risk of vertical transmission of the virus to their children.
AUTHOR: Arai F.; Tanigawa T.; Hazui Y.; Ishijo M.; Tokyama T.
CORPORATE SOURCE: Dept. Obstetrics and Gynecology, Nara Medical University, Shijocho 840, Kashihara, Nara 634, Japan
SOURCE: Journal of Infection, (1993) 27/2 (151-155).
ISSN: 0163-4453 CODEN: JINFDJ
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
007 Pediatrics and Pediatric Surgery
017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
AB When **pregnant** women were tested for antibody to human T-cell leukemia virus-I, some were found to be positive although they had been negative during the previous pregnancy. In these women, **HTLV-I** infection was found from pedigree studies to have been acquired from their mothers rather than from their husbands. Furthermore, some of them had apparently remained **HTLV-I** antibody-negative for long periods after infection. When the breast-fed children of these women, in whom **HTLV-I** was acquired from their mothers but who were in an **HTLV-I** antibody-negative state, were also examined for evidence of **HTLV-I** infection, none was found.

L11 ANSWER 11 OF 13 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 93125940 MEDLINE
DOCUMENT NUMBER: 93125940
TITLE: [Vertical transmission of **HTLV-I**].
Transmission verticale de l'HTLV-1.
AUTHOR: Denis F; Mercier M; Denis J
CORPORATE SOURCE: Departement de Bacteriologie-Virologie, CHU Dupuytren, Limoges, France..
SOURCE: PATHOLOGIE BIOLOGIE, (1992 Sep) 40 (7) 714-9. Ref: 29
Journal code: OSC. ISSN: 0369-8114.
PUB. COUNTRY: France
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW LITERATURE)
LANGUAGE: French
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199304
AB Vertical transmission of the human T-cell leukemia type 1 (HTLV-1) from seropositive mothers to their offspring has been extensively studied. Transmission occurs mainly through breastfeeding. Prevention relies on screening **pregnant** women (and wet-nurses) for HTLV-1 antibodies and advising seropositive women to refrain **breast feeding**. Recently, antigen detection or genome detection (using PCR) studies on lymphocytes from neonates born to HTLV-1 positive mothers have established that neonatal vertical transmission does occur, although in only a small proportion of cases (4.5 to 7%). Studies on the HTLV-1 and improved understanding of its modes of transmission may provide new